

Bush (J. M.)

# INTRODUCTORY LECTURE,

TO THE

## DISSECTING CLASS

OF

TRANSYLVANIA UNIVERSITY,

LEXINGTON, NOV. 9, 1840.

(2)

BY JAMES M. BUSH, M. D.

Adjunct Professor of Anatomy and Surgery, &c.

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THURSDAY MORNING, Nov. 12, 1840.

Professor BUSH:—The undersigned have been appointed a committee by the Dissecting Class, to request of you a copy of your Introductory Address for publication.

With sentiments of respect, yours,

JOSEPH R. SMITH,  
R. P. HUNT,  
E. L. DUDLEY.

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NOVEMBER 13; 1840.

GENTLEMEN:—If the Dissecting Class consider my Address worthy of publication, it is at their disposal. I assure you the distinction is properly appreciated, while you will accept for the Class, and yourselves individually, my highest regard.

J. M. BUSH.

Messrs. SMITH,  
HUNT,      } Committee.  
DUDLEY,

## A D D R E S S .

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About commencing the acquisition of knowledge in any department of learning, and especially in professional science, a paramount consideration is to understand, thoroughly and distinctly, the nature of the field presented for our enquiry. To begin the study of a subject without clear and impressive notions of its true character, embracing the importance of its scientific standing as well as the responsibilities of its practical relations, would be absurd, as the student would certainly reap neither profit nor distinction in its laborious and dull cultivation. Indefinite ideas of the proper character of any subject, are worse than no opinion, and always infuse their kindred tone into the understanding, whether the period of fruitless research be long or short. It is, then, a matter of the highest importance, in entering the threshold of medical investigation, to be prepared with right conceptions of its true nature, and never forgetting their application in all its bearings. The art of healing diseases was instituted through necessity, for the happiness and general good of humanity. Its noble object, deeply founded in the best and purest feelings of the human heart, knew no selfish motive of pecuniary aggrandizement, when man first made his observations in disease, and awakened his sympathies in behalf of his fellow, borne down with torturing malady, as in the primeval ages of its history, the father of physic, that immortal physician of Cos, refused the foreign gold that would have bought him to the East. Although our profession, studied as such, and pursued with an object of profit, and when practised with persevering industry, is one of the most lucrative, yet, in its essential character, it *has not one* principle that degrades it to the level of an ordinary trade, followed alone and with no higher motive, than the mere consideration of gain. He that administers to the comforts of the body, must have his reward, and as justly too, as the physician of the soul. But higher feelings and considerations of more elevated tone, should first and always reside in our bosoms to prompt us in the study and in the administration too, of our noble and dignified duty. In the scale of dignity, man, of all creation, holds the highest degree. His physical organization, while it subjects him to the laws of generation, growth and dissolution, which reach all the orders of living nature, sustains at the same time, in each of its parts, and as a whole, a character so peculiar, so extraordinary, and so sublime,

that it is impossible to suppose even the most distant relationship between the brutes, creatures of mere animal feelings, which do nothing beside feeding and propagating on the surface of the earth, and him who is born to exercise dominion over them. His upright and elevated carriage, indicating dignity and courage; his hands the most curious instruments of his will, and dexterous performers of the most magnificent as well as the most useful works; his eyes, whose intelligent glance elevated toward the sun, surveys the immensity of the heavens; the organs by which he expresses thought, with an endless variety of sounds; that admirable union of strength and activity in the locomotive powers; and last, the harmony and perfection of all his senses, assign to him the first rank amongst living beings, and give him both the right to claim, and the power to hold, the empire of the earth. For the good of such a being, we, gentlemen! have assembled in this dedicated temple of science, and this greatest work of all creation is to be the subject of our investigations. Medicine has been called a noble art, and truly this distinguished title is its own. For within the periphery of its extended circle, is embraced all that is elevated in science; every thing that excites wonder and admiration in the infinite wisdom of the creator of organization, of the author of existence. Ten thousand myriads of animated forms are legitimate subjects in the studio of the anatomist, while the endless variety of living actions in the organs of their economy, cast lights along the path of the physiologist. As a science, it is the most elevated of all professions, while its practice leads the mind to a state of the most happy gratification. We are justified in declaring that medicine embraces universal science; that religion itself belongs to it, because it exercises all the varieties of goodness of the human heart, while it develops every shade of feeling that springs from morality.

It is not my design, gentlemen! to array before you a lengthened list of the associated sciences of medicine, and then after the long enumeration, say to you, all these *must* be embraced before you can accomplish the learning required to make good physicians and surgeons; but only in introducing your attention to the point of the brief remarks that are to follow, simply allude to the exalted character of the profession, the study of which we are about commencing, and urge as the first object, the high importance of laying *deep* and *broad* the foundation of a good medical education. Without a skilful arrangement in our own minds, of the fundamental principles of medical philosophy; without a clear and distinct beginning in the acquisition of the elementary laws, clearly defined and understood, as the basis of all medical science, it is impossible that any thing can be obtained beside a mere *ordinary* name of *Doctor*, or the profession be practised with any other gratification—did I say gratification?—feeling, of miserable con-

sciousness of a routine empiric. None who have embarked in the study of medicine, have a right to plead the want of an elementary education in general learning, and for such reason to place their mark of attainment low; although previous liberal education gives great advantage in the literary cultivation and distinction of professional subjects. It is a science of thinking, founded in common sense reflections; and therefore all are capable, no matter how humble previous means of education may have been, of beginning rightly and conducting happily, by exerting the proper labor, the arduous though pleasing task of medical learning. The first subject to arrest the attention of the student of our art, as the chief object of his thinking mind, is the preparation unconditionally required for the thorough and complete formation of the principles of medicine. To acquire, then, the philosophy, the laws which are to govern the rational practice of the science, should be the first and great desideratum of all. The broad line of distinction between the scientific physician and the moping empiric, is altogether constituted by this essential proposition. The enlightened and philosophic man, with a mind tranquil, firm, and conscious of the exercise of his profession, in a rational manner effects the removal of maladies upon principles induced and established upon the observations of the laws of animated nature; while the quack, with all the mysteries of his vile professions, administers his physic and his drugs; guided by no philosophy, but following the routine list of his ignorant and stupid predecessors. He can tell that his potions cleanse and purify the blood, purge away the poisoned humors and invite back the spirits of health again into the breathing lungs; but has no conception of the wonderful machinery and the various *powers*, as the *laws* of life, operate in the production, or rather restoration of, the lost balance of harmony constituting the manifold diseases of human existence. He takes the pulse of his deluded and deceived patient into his hand, he views his coated tongue, and observes his hurried respiration with serious and grave consequence; about as much reason in his soul, as the automaton figure exercises, that is made to move by the influence of the springs of the machinist; and thereupon orders his heterogeneous compounds.

It becomes us, gentlemen! to study ourselves thinkingly, and to understand by rigid observation the nature of our own existence, so far as the causes (causes perhaps is an improper term, phenomena of life, expresses better,) influence the body in every state of health. Before we can comprehend properly, and arrange without confusion, the laws governing the living human body, in health and in disease, anatomy must be made a familiar subject. The construction of the most noble work in nature, as man has been called, must be leisurely and *well* studied in all its individual departments, as well as in the formation, arrangement and relations

of the whole, before the separate and collective duties of the different organs can be explained or comprehended. Become first, then, good and thorough anatomists, and the best, and indeed the only true foundation, upon which to start successful and pleasing investigations of the science, is made, and unquestionably required, for the profitable cultivation of the study of medicine. It is too often the case, that gentlemen about beginning the acquisition of anatomical knowledge, permit themselves at first to become disheartened, from many reasons. To a few, the idea of investigating the cold and decomposing remains of mortality, is startling, and from the associations of the superstitious nurse, the impressions of early infancy, repel with a kind of disgust, human dissections. To some, discouragement comes through the authors on this subject, in consequence of the apparent difficulty in the nomenclature of the science, and for this, not a good reason, determine, and condemn it as a department so obscure and difficult as not to merit attention, settling in their own minds the impossibility of accomplishing its knowledge. Many, from these combined seeming reasons and difficulties, lose confidence in their powers of acquisition, and aim only for that sufficiency of knowledge that may sustain a *green box* examination. These are most unhappy and erroneous views. For the student will find, when perhaps too late, such first impressions are afterwards removed with the greatest difficulties and embarrassments. Like the philosopher, we are to approach the dissecting board, and interrogate the dead body with all the interest which attaches to a most pleasing and scientific pursuit. To attain a profitable knowledge of the science, it is necessary for the mind to be active and persevering, with the energetic exercise of memory and association. None of those higher faculties are required in the study of anatomy which engage the enquirer into the laws of life. The structure and arrangement of the body presents a volume of the most interesting charts in nature, admirable for their beauty, simplicity and perfection. Approaching the investigation of the subject, with the proper regard and interest in the high importance of the matter, passing from one system to another, developing the curious organization of the supreme machine of animated existence, anatomy seizes the mind with a kind of mystic enchantment, and infuses into the student a charm irresistible for its cultivation. This desirable and indispensable knowledge, of the useful physician being secured, we are prepared to study in the most pleasing and successful manner those laws of life, from which principles are to be deduced and arranged with a view to a philosophic practice of the profession. And we would say no motto can be more appropriate, no axiom more necessary for the constant view of the professional student, than "*Observatione optima duce et magistra ad cuius leges et norma, nisi exerceatur medicina, eam prorsus exulare satius esset.*" The re-

flecting observance in our own minds, of every thing calculated to illustrate the principles and practice of medicine, tested by the scrutiny of our own judgments, will always ensure the development of truth and the detection of error. In the investigation of all subjects, the great object is the selection of the truths from the misconceptions and false doctrines; and for this reason, we should listen to opinions, unless self-evident, always cautiously, and receive or reject them, only after our own reason and judgment have been fully exercised. The habit of thinking for ourselves is perhaps more rare than we are often willing to admit; and the despotic influence of authority maintains a more powerful sway over our opinions, and especially in our own profession, than we are aware of; and perhaps the tardy and empirical march of the art owes as much to the universal obedience of authority as to any other source. We feel ourselves bound by a kind of listless reverence, or rather by a feeling, the want of independence, or the unpardonable absence of our own reflection, to receive as true and incontrovertible every thing that comes in the shape of authority. It is assuredly most praiseworthy to regard the doctrines of our teachers and consult them with patient attention, reserving the right to receive or not, as our own judgments may concur in the reasons. There seems to be something in the nature of the profession, in the moral and intellectual constitution of man, that offers great resistance to its advancement. Certainly medicine as a science has improved much; nevertheless in many things, we to-day stand surrounded by the same ignorance that enveloped our fathers. Some of the most industrious and talented men in the field of science of the past and present ages, have been, and are, physicians; and 'tis a fact, that the press is perhaps engaged as busily in issuing the writings of medical men, as those of any other scientific profession; yet the fact is, although lamentable, that our advances toward more perfection in the art continue slow and uncertain. Would it be injustice to hazard the opinion that the increased multiplicity of books and diffusion of their doctrines amongst the readers of a profession too servile to authority, offers a barrier? When 'tis known, too, that many of those who dictate to the profession, especially in Europe, are men not engaged, or but to a limited extent, in the practical duties of the art? Volume after volume appears, filled with opinions, the result of closet reflections, as principles upon which the lives of human beings are to hang for succor in the hour of perilous disease. Can books effect good for the profession, produced by the efforts of mind at the desk alone, when experience in the observation of the laws of life in health, and those laws modified in disease and observed in practice, is absent? Can books dispense usefulness, when they only contain re-written opinions, with notes added, from the judgment of speculation?

The increase of libraries by such means is to be deprecated by the friends of true philosophy in medicine. The labor for the student becomes thus immense and irksome, and he is either frightened at the herculean task and recoils from it, or he must plod laboriously over many hundreds of pages that record no useful principle, no profitable fact. It seems that this error in the formation of the science, results from a peculiar disposition in ambitious physicians to become distinguished *early*, as dictators to the profession; impatient to await the reputation always certain to be awarded by fame to him who, with industrious and mature judgment, has achieved his laurels in action, and disarmed disease by his superior skill, governed by rules divested of technical speculation, drawn up by common sense understanding. Does it not appear reasonable, before principles and doctrines should be recorded with a view of advancing science, and benefiting professional posterity, that they should be well weighed in the balance of fair and scrutinizing observation, and the practice deduced from them and inculcated, subjected to a varied and extensive field of the most active practice; and inasmuch as the nature of the laws of life, the peculiarities of the laws of disease, the great diversity in the physical and moral actions that influence maladies, the ever-changing constitution of man, with the ten thousand shades and varieties of his nature, in all respects embrace that knowledge which is required to be mastered in a greater or lesser degree by him who would institute the rules to govern us in practice. With such views on the subject of authority, worth whatever they may be, it follows plainly, that the medical man should reserve as his last professional act, that of publishing his accumulated knowledge. Our science is progressive, and therefore why fall into the folly of publishing doctrines to-day, that ten years hence experience will fail to corroborate, and with mortifying regret must be thrown off into the general chaos of error.

In these opinions, do not understand me as opposing the study of books, or advocating their neglect. They constitute the luxury of our profession; without them, our science could not merit such a name. Our object is to guard against the despotism of authority; to infuse a spirit of jealousy, that opinions, or doctrines, or practice, may be investigated, studied and well weighed in our own thinking judgment, before we take them as orthodox. No one can be too industrious with his books, and no one can feel prouder than ourselves, of the rich and magnificent library this institution opens to your studies, and invites you partake of. Read much, but think more; and were such the universal opinion of the profession, we should not to-day be required to wade through volumes of rubbish in search of those pages that have made immortal their authors. With a view of constructing the basis of our future knowledge, and attaining thorough elementary principles, such as

will ensure a pleasing pursuit and unincumbered progress in the various studies, as they successively come up to our attention, the mind should be constantly engaged in the proper field of observation. The laws of life, as they operate in the production of the various phenomena of the body, constitute the true, extensive and most fruitful source, upon which to exercise our reason and observation, for the formation of correct rules and doctrines. It is rational occupation to study such laws, actions and phenomena, and their influences on the body in health and disease, while the laborious investigations into the causes or original reasons of such laws, operating in the production of vital effects in the various sub-systems of the body, are productive of the most fruitless labor. The explanation of muscular contractility, of nervous irritability, or the medullary principle, involve questions that have occupied the lives and the understandings of the most learned men of the science; and what good result, so far as the practical skill of the art is concerned, has followed? Or indeed, has science, legitimate science, received any thing by their labors? Do we understand now what first cause it is that actuates the muscles in the production of contraction? Are *we* any more familiar with that original law that bids the motion of the heart in perpetuating, without fatigue, the crimson current through the body? Can *we* explain any better to-day, than could Galen or Hippocrates, the principle regulating those unconscious movements of the stomach and bowels, in the digestion of the nutrient material? Surely *we* cannot; and in the entire history of the profession, on these, and all parallel points in its philosophy, our ignorance is alike. All questions, we honestly believe, involving the reasons of first principles, original causes, whether in their investigations the labor is intended for the elucidation of physiology or the development of pathological principles, are not the proper subjects for professional study. Such, by the laws of nature, do not come within our powers of explanation; while every thing in her vast domain, that can throw light upon science, in which the practical good of humanity is in the slightest degree interested, is always available.

“Could he whose ~~rules~~ the rapid comet bind,  
 Describe or fix one movement of his mind?  
 Who saw its fires here rise, and there descend,  
 Explain his own beginning or his end?  
 Go measure earth, weigh air, and state the tides;  
 Go, wondrous creature! mount where science guides,  
 Instruct the planets in what orbs to run,  
 Correct old Time, and regulate the sun:  
 Go, soar with Plato to th’ empyreal sphere,  
 To the first good, first perfect, and first fair;  
 Go teach Eternal Wisdom how to rule—  
 Then drop into thyself and be a fool!”

That man should know so much of the universe, and so very little of *himself*, is indeed one of the circumstances which, in the language of the same poet, most strongly characterize him as the “jest and riddle” of that world of which he is also no less truly the “glory.” That the intelligence of any being, to use the words of a distinguished philosopher, should not pass beyond certain limits; that in one species of beings it should be more or less circumscribed than in another—all this is not surprising, more than that a blade of grass should be less tall than a shrub, or a shrub than an oak. But that the *same* being should be at once arrested, by the narrow circle which nature has traced around him, and yet constantly reminded that beyond these limits there are objects which he is never to attain; that he should be able to reason, till he loses himself on the existence and nature of those objects, though condemned to be eternally ignorant of them; that he should have too little sagacity to *resolve* an infinity of questions which he has yet sagacity enough to *make*; that the principle within us, which thinks, should ask itself in vain, what is it, which constitutes its thought? and that this thought which sees so many things so *distant*, should yet not be able to see itself which is so *near*, that self, which it is always, notwithstanding, striving to see and to know: these are contradictions which, in the very pride of our reasoning, cannot fail to surprise and confound us. All that remains for us in that impossibility which nature has imposed on us, of attaining a more intimate knowledge of the essence and constitution, either of mind or matter, is to attend to the phenomena which they present, analysing whatever is complex and tracing the order of every sequence. By attentive observation and close reflection on the phenomena themselves, and on all the circumstances which precede or follow them, we shall be able to discover the relations which they mutually bear, and to distinguish their casual, or accidental coincidences, from those invariable relations which nature has established among them, as causes and effects. This, humble as it may appear, is the true philosophy of man; a philosophy instituted in his creation, and it is all of which man is capable. To enquire, as may be thought, more deeply into the essences of things, or the nature of certain supposed links, by which they are connected, is to show—not that we have advanced far in the progress of science—but that we have gone farther astray; not that we know *more* than philosophers of humbler views and pretensions, but that we know *less*, since it proves that we are unacquainted with the limits within which nature has bounded our prospects, and have not attained that prime knowledge which consists in knowing how little can be known. With such views on the nature of enquiry, it will be admitted that questions which involve first causes, are beyond the sphere of the philosopher’s comprehension. For the organization of medical

principles, with the view of practical good to humanity, our enquiries should lead us, not to elementary causes of vital actions, but to analyze, observe and arrange their physiological phenomena, comparing them with pathological subjects, as disease manifests its variety of continual changes. What is life? It is not the place of man, nor within the means of his proud intellect, to study or understand life, in the abstract, for the perpetuation of which, amelioration of which, the promotion of the happiness of which, the ennobling art we profess, was instituted. 'Tis a curious and yet unanswered question—what is life? The student of nature may analyze with all his art, those minute portions of matter called seeds and ova, which he knows to be the rudiments of future creatures, and the links by which endless generations of living beings hang to existence; but he cannot separate and display apart their mysterious life, that something incomprehensible, under the influence of which each little germ, placed in certain conditions, swells out to fill an invisible mould of maturity which determines its form and proportions. One such substance thus becomes the beauteous, blooming rose-bush, another springs up to grow the forest king, a noble oak; a third, wings its majestic flight from the mountain crag, the proud eagle; a fourth treads the desert plain, the mighty elephant; and in the same way, from the rude materials of broken seeds, and roots, and leaves of plants, and bits of animal flesh, is built up the human form itself. How strange that such should be the origin of the bright human eye, of the lips which utter the richest eloquence, of the larynx, the vibrations of whose curious form produce all the melodies of music; and more wonderful than all, that mass shut up within the bony fortress of the skull, whose delicate and curious texture is the abode of the soul with its reason, which contemplates, and its sensibilities, which delight in, these and other endless miracles of creation. The manifestations of life, as it appears, infusing itself into all the orders of living creatures, seem from the most humble of its tenements in the form of organization, through the grand scale of animation, to the last, the most complex though most perfect, man, to sustain connexions. Few and simple laws regulate the economy of the lower classes, while multiplicity and complexity increase with the perfection of the animal. Here observation becomes a science, and the meanest *zoophite* lends illustration in concluding the principles which the laws of life authorize for the practice of medicine and surgery.

Already have we gone too far, and forfeited the greatest merit of an introductory, brevity. If any hints have been caught by you that may be useful in eliciting reflection upon the importance of first principles, and the best mode of studying the nature of the science, and we reciprocally perform our respective duties, Transylvania, at the close of our course, will boast of her alumni. To

conclude, gentlemen! the short period of a four month's session will soon, very soon, pass away, and you can already feel in anticipation, your anxieties on the Ides of March. Honor is to be won by labor, distinction is to be acquired by persevering industry; and, in the language of our worthy President of the institution, there is no "north-west passage" to the temple of medical fame. Toil, industrious toil, is required, to prepare you for the doctorate, if you would be initiated with distinction. This magnificent edifice, with its rich and elegant library, the useful and attractive apparatus, chemical and anatomical, may all be devoted, with the best abilities of the whole Faculty, to your improvement, and profit you nothing, unless *you* too, join heartily in the labor. Improve the present, master thoroughly every thing, as you are presented with all the departments, and you have a guarantee of success. You will not realize those forebodings and anxious feelings which too often are expressed when the course is concluded, and the most interesting occasion of a student's life arrives. Medical science must be elevated, and you, gentlemen! can accomplish much toward the attainment of that object; and in awarding her honors to you, Transylvania expects that they will be hereafter reciprocated.

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\* \* The number of matriculated pupils in the Medical Department, up to this date, Dec. 4, is two hundred and forty-six.

The Class have already witnessed the following surgical operations: One for Hydrocele, one for Cataract, one for Fistula-in-ano, one for the exsection of a Tumor from the axilla; two for Stone in the Bladder.